



## **CBA Basics** - Introduction to Cost-Benefit Analysis

Course Outline

April 2019

## 1. Class details

Course Presenter:	Joanne Leung, Ministry of Transport Kirsten Jensen, NZ Treasury
Course Administrator:	Zaneta Waitai Email: <a href="mailto:zaneta.waitai@mbie.govt.nz">zaneta.waitai@mbie.govt.nz</a>
Date and time:	8-9 April 2019, 9:00 am – 4:30 pm
Venue:	The Treasury, Level 3, 1 Terrace, Wellington

There will be a 1 hour break for lunch (provided) and 15 minute morning and afternoon break in each session. Coffee and tea will be provided.

## 2. Description

Many public policy decisions involve balancing costs and benefits. Cost-benefit analysis provides a structured framework for comparing costs to benefits and analysing which are greater overall. The objective of this course is to provide participants with an appreciation of that framework, gain a broad understanding of the economic theory that underlies cost-benefit analysis, as well as the specific quantitative steps necessary to execute a cost-benefit analysis.

## 3. Course Learning Objectives

On completion of this course, participants should be able to:

- identify when a policy question or issue would benefit from cost-benefit analysis;
- where appropriate, to translate a generic statement of a policy question or issue into an properly framed cost-benefit analysis;
- appreciate how costs and benefits that occur over time should be handled, including discussion of the choice and application of a discount rate;
- aware of the methods for quantifying costs and benefits that are not immediately measurable in economic terms and their roles in cost-benefit analysis;
- recognise and appropriately incorporate costs and benefits that are not possible to quantify;
- present the results of cost-benefit analysis to decision-makers in an effective manner (including how to complete NZ Treasury's template).

## 4. Session outline and delivery

	<b>Topic outline</b>
Day 1 morning	Introduction and learning objectives Structure of a cost-benefit analysis (CBA) The roles of CBA in policy development process Framing a cost-benefit analysis
Day 1 afternoon	Components of a cost-benefit analysis Identifying cost and benefit items Carrying out a qualitative cost-benefit analysis
Day 2 morning	Overview of valuation of costs and benefits Sourcing cost and benefit values Key steps to carry out a quantitative cost-benefit analysis Handling costs and benefits over time
Day 2 afternoon	Treatment of uncertainty Presentation of analysis, results and recommendation An overview of the Treasury CBAX tool (if time permits)

The course will have a mixture of presentations, discussions and group exercise. About half of the time will be set aside for discussions and group exercise. We will use a range of real-life examples to illustrate the concepts, approach and process. Although it is not possible to cover all sectors or policy fields, the principles and framework to be discussed will apply to a wide range of applications. Active participant engagement and interaction in classes is expected.

Depending on the level of interest, separate tutorial sessions could be arranged for students who wish to go through the CBAX tool in more details.

## 5. Target audience and assumed background

This course will be most helpful to policy advisors who need to understand the basic mechanics of a cost-benefit analysis, to conduct or be able to critically review cost-benefit analyses done by others.

No previous knowledge of economics is assumed. Some familiarity with economic thinking and terminologies would be helpful. The course will sometimes mention a modest amount of mathematical formula or analysis. However, the emphasis will be around awareness of the methodology and its underlying institution rather than the actual mathematical calculation. You will not be asked to carry out any mathematical exercise as part of the assessment for this course. This course does require a willingness and ability to take part in class and group exercise.

## 6. Course Costs

This course is provided by the Government Economics Network (GEN) at a cost of \$450 plus GST per person (lunch provided).

## 7. Course materials

A small amount of reading will be provided to participants closer to the time.

For those who would like to do further reading, you might want to familiarise yourself with the Treasury's CBAX tool and guidance:

- Treasury's CBAX tool (see [link here](#))
- Section 3 (pp. 10-18) of the CBAX Tool User Guidance (see [link here](#)).

## 8. Group assignment and assessment

### 8.1 Assignment

Participants are required to prepare a group assignment to conduct a hypothetical cost-benefit analysis of some policy. Participants will be assigned to groups.

The purpose of the assignment is to (1) deepen understanding of the specific analytical tools embedded in cost benefit analysis and (2) stimulate reflection on both the strengths and shortcomings of the approach. Since the collection of actual data to undertake the analysis would be beyond the scope of a project of this type, the focus will be on construction and hypothetical analysis, not analysis of real information.

The assignment aims to help attendees to:

1. define the policy question or issue that the cost benefit analysis intended to illuminate;
2. identify the relevant categories of costs and benefits that need to be quantified;
3. consider the kind of data that would need to be collected or developed to provide the basis for quantification for each identified category of costs and benefits;
4. understand how best to utilise readily available information to inform the cost and benefit analysis;
5. understand what parameters or assumptions (e.g. time horizon, discount rate, treatment of effects of other policies) might be necessary to complete the analysis;
6. appreciate the role of sensitivity analysis and be aware of the caveats; and
7. concisely summarise the cost benefit analysis results.

The assignment should be completed using the GEN assignment template and should be no longer than 8-page in length (including all tables, figures, illustrations, footnotes and references, etc.).

### 8.2 Assessment

All members of the group who contribute to the assignment will be given the same grade. Group management is a matter for the group itself, including issues of free-rider behaviour. Participants may wish to note the email addresses of each member of the group to complete the assignment after the course. Grading criteria are indicated in the assessment matrix below.

Criterion
Appropriateness of problem definition and framing of the analysis
Completeness and appropriateness of identification of costs and benefits
Appropriateness and justification of assumptions
Appropriateness and justification of the approach and methodology chosen
Consideration of sensitivities and caveats
Quality of writing and presentation

The assignment should be typed and neatly presented and submitted by email to the Course Administrator by close of business on the date due 23 April 2019. Successful participants will be awarded a GEN certificate of completion.

### 8.3 Plagiarism

Plagiarism is unacceptable in any format. Participants should be aware that software (e.g. “Turn-it-in”) may be used at the discretion of GEN to review material submitted. Serious penalties may be applied in cases of plagiarism.

## 9. Attendance Requirements

Full attendance by participants is expected and a record of attendance will be maintained in this subject. Where absence is unavoidable, notification to the Course Administrator as soon as possible is required. If a participant is absent for two sessions or more, additional work in lieu of attendance will be required to be eligible to pass this course.

## 10. Withdrawal from Course

If a participant is unable to attend, the registration may be transferred to another person by advising the Course Administrator in writing at least 2 days before the start of the course.